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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,933	12/14/2001	David O. Melgar	RSW920010220US1	6218

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EXAMINER

MITCHELL, JASON D

ART UNIT	PAPER NUMBER
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2193

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/016,933	Applicant(s) MELGAR, DAVID O.	
	Examiner Jason Mitchell	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/15/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 16, 20, 21 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 16, 20-21, 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to remarks filed 3/15/06.

At Applicant's request, Claims 1 and 26-27 have been amended; claims 28 and 29 have been added. Claims 1-7, 16, 20-21 and 26-29 are pending.

Response to Arguments

Applicant's arguments filed on 3/15/06 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically Examiner could find no disclosure describing exactly what is intended by the claimed limitation 'each of the templates is independent of the message syntax definitions' (emphasis mine).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 16, 20-21 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,792,466 to Saulpaugh et al. (Saulpaugh) in view of US 5,875,331 to Lindsey (Lindsey).

Regarding Claims 1, 26-27: Saulpaugh discloses detecting, during run-time processing of a machine-processable definition of a network invocable service, a reference to a structured language specification; locating, responsive to the detection, the referenced structured language specification the structured language specification encoded in a structured markup language and specifying message syntax definitions for one or more messages usable for interacting with the network invocable service;

(col. 20, lines 26-28 'the pieces the gate factory needs ... are the XML schema of the service (from the service advertisement) and the URI of the service (from the service advertisement)')

and generating code for the message syntax definitions in the located structured language specification;

(col. 20, lines 14-20 'The client may have a gate factory ... for generating gates based on XML service descriptions')

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wherein the generated code for the message syntax definitions comprises the class library, such that instances of classes specified by the class library are instantiable to be dynamically available for sending request messages, and receiving response messages from, the network invocable service,

(col. 19, lines 34-35 'A basic message gate may implement an API to send and receive messages')

further comprising steps of: locating, in the structured language specification, the message syntax definitions of the messages; generating code that, when executed, will build an instance of each message for sending and will, if the message syntax definitions for the message specifies parameters, dynamically obtain values for the parameters and set those parameter values in the built instance; generating code that, when executed, will send the built instance of each message, including any set parameter values, to the network-invocable service as a request message;

(col. 30, lines 4-16 'Code may be generated as part of the gate for interfacing to one or more methods. Each method invocation ... may cause a message to be sent to the service containing the marshaled method parameters. The message syntax and parameters to be included may be specified in the XML schema.')

generating code that, when executed, will receive a response to the sent instance of each message from the network-invocable service as a response message and build a response instance therefrom; and applying the selected template to the located message syntax definitions to generate code that, when executed, will dynamically

obtain any defined response values from each received response message and populate the response instance therewith;

(col. 30, lines 32-43 'The method gate may provide a synchronous request-response message interface in which clients remotely call methods causing services to return results. ... An object reference 178 may be a generated code proxy (e.g. result gate) representing the real object result 180')

such that the code is dynamically invocable during the run-time processing for sending the request messages to, and receiving the response messages from, the network-invocable service.

(col. 18, lines 25-28 'Messages gates allow clients and services to exchange XML messages'; col. 21, lines 15-19 'when a client desires to use a service, ... the gate may be created by a gate factory as part of instantiating the service').

Saulpaugh does not explicitly disclose generating code for the message syntax definitions according to a dynamically-selected one of a plurality of language-specific code-generation templates. However Saulpaugh does disclose 'A gate factory ... may generate gate code that may incorporate the language ... of the local device platform' *(col. 20, lines 47-59).*

Lindsey teaches generating code for a specification according to code-generation guidance specified in a dynamically-selected one of a plurality of language-specific code-generation templates that each specify guidance for generating code in a different programming language,

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(col. 6, lines 2-5 'one or more sets of target language specific source code templates' ; col. 7, lines 1-4 The target language can be ... specified by the user when the mapping is about to occur')

the guidance specified as an image of code to be generated in that programming language and comprising syntax indicating where portions of the message syntax definitions are to be substituted for portions of the specified image,

(col. 7, lines 38-64 'each source code template will consist of two components, the first being an actual target language source code fragments and the second component being a generator directive ... The return value ... is the VARIABLE portion ... The generator algorithm appends the return value to the source code fragment from the source code template')

It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply Lindsey's language-specific code generation templates (col. 6, lines 2-5) in Saulpaugh's 'gate factories' as a means of generating 'code that *[incorporates] the language ... of the local device platform*' (col. 20, lines 47-59) because Lindsey's techniques 'provide a highly extensible and easily modifiable source code generator' (Lindsey col. 2, lines 49-51)

Regarding Claim 2: The rejection of claim 1 is incorporated; further, Saulpaugh discloses the structured language specification is a schema (col. 16, lines 6-7 'A service's message set may be defined using an XML schema').

Regarding Claim 4: The rejection of claim 1 is incorporated; further, Saulpaugh discloses that the structured markup language is Extensible Markup Language (col. 16, lines 6-7 'an XML schema').

Regarding Claim 5: The rejection of claim 1 is incorporated; further, Saulpaugh discloses the message syntax definitions specify elements corresponding to the messages and optionally specify attributes corresponding to the elements, the elements and attributes being encoded in the structured markup language (col. 17, line 66-col. 18, line1 'the messages may include tags ... a message data field').

Regarding Claim 16: The rejection of claim 1 is incorporated; further, Saulpaugh discloses programmatically consulting one or more rules, wherein the rules specify a name for a class library comprising the generated code, to influence processing of the generating step (col. 25, lines 50-53 'gate names may be generated as a combination of a string ... and a random number').

Regarding Claim 20: The rejection of claim 1 is incorporated; further, Saulpaugh discloses the network-invokable service is a web service (col. 15, lines 18-19 'The network may be ... the Internet').

Regarding Claim 21: The rejection of claim 20 is incorporated; further Saulpaugh discloses the reference is specified as a Uniform Resource Locator and the machine-processable definition is specified in a Web Services Definition Language document (col. 15, lines 23-25 'The advertisement 132 specifies the service's XML schema and URI address').

Regarding Claim 28: The rejection of claim 1 is incorporated; further, Lindsey discloses the dynamically-selected one of the templates is one of the templates that specifies the guidance in a particular programming language for which the class library is to be generated (col. 7, lines 1-4 The target language can be ... specified by the user when the mapping is about to occur').

Regarding Claim 29: The rejection of claim 1 is incorporated; further, Lindsey discloses each of the templates is independent of the definitions for which the code is to be generated.

Note that in Fig. 2 Lindsey's templates 38, 40 and 42 are shown as separate and unconnected to the 4GL User Interface 32 that is used to provide the definitions ('4GL Specification'). Thus they can be considered independent.

Claims 3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,792,466 to Saulpaugh et al. (Saulpaugh) in view of US 5,875,331 to Lindsey (Lindsey) and further in view of Extensible Markup Language (XML) 1.0 by W3C (XML 1.0).

Regarding Claim 3: The rejection of claim 1 is incorporated; further the Saulpaugh-Lindsey combination does not explicitly disclose the structured language specification is a DTD but discloses that 'A service's message set may be defined using an XML schema' (Saulpaugh col. 16, lines 6-7).

XML 1.0 teaches that XML documents are defined by DTDs (2.8 Prologue and Document Type Declaration 'The XML document type declaration ... provide a grammar for a class of documents').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use such a DTD to define Saulpaugh's messages (col. 16, lines 22-24 'embodied as XML messages') in order to 'provide a grammar' for the messages (XML 1.0 2.8).

Regarding Claim 6: The rejection of claim 5 is incorporated; further, the Saulpaugh-Lindsey combination does not explicitly disclose the message syntax definitions specify at least one child element for at least one element. However Saulpaugh does disclose that 'A service's message set may be defined using an XML schema' (col. 16, lines 6-7) and that the messages are in XML (col. 16, lines 22-24 'embodied as XML messages'). XML 1.0 teaches that XML supports the parent child relationship (2.1 Well-formed XML Documents 'P is referred to as the parent of C, and C as a child of P').

It would have been obvious to a person of ordinary skill in the art at the time of the invention define child elements in Saulpaugh's messages because one of ordinary skill in the art would have been motivated to leverage the XML's full functionality thereby creating a more robust messaging system (col. 14, lines 38-43 'XML may be leveraged').

Regarding Claim 7: The rejection of claim 5 is incorporated; further, the Saulpaugh-Lindsey combination does not explicitly disclose the message syntax definitions specify whether the attributes are required attributes. However Saulpaugh does disclose verifying messages (Col. 7, lines 48-50 'verify the correctness of the message'). Saulpaugh further disclose those messages are in XML format (col. 16, lines 22-24 'embodied as XML messages').

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XML 1.0 teaches that XML supports required attributes (3.3.2 Attribute Defaults 'An attribute declaration provides information on whether the attribute's presence is required').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize XML's required attributes because one of ordinary skill in the art would have been motivated to leverage the XML's full functionality thereby creating a more robust messaging system (col. 14, lines 38-43 'XML may be leveraged').

Conclusion

In view of the new grounds of rejection presented, **this action is made NON-FINAL.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jason Mitchell
6/7/06



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